



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/773,090

02/05/2004

Densen Cao

5073 P

3289

7590

10/05/2005

Parsons Behle & Latimer  
Suite 1800  
201 South Main Street  
P.O. Box 45898  
Salt Lake City, UT 84111

EXAMINER

TRUONG, BAO Q

ART UNIT

PAPER NUMBER

2875

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/773,090

Applicant(s)

CAO, DENSEN

Examiner

Bao Q. Truong

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/9/04 &amp; 3/15/05</u>  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1-7 and 9-19 are objected to because of the following informalities:  
  
Claims 2-7 and 9-19, "A device" in the preamble should be changed to –The backlight-- since "A backlight" is recited in the preamble of independent claims 1 and 8.  
  
Claims 1 and 9, "it" in last paragraph should be changed to what it refers.  
  
Claims 10-12, there is lack of antecedent basis for "said coating".  
  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 8, 18 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Reed [US 6,808,289].

Regarding claims 8 and 20, Reed discloses a backlight having a housing [102], a flexible conduit [122], a semiconductor chip [339] and a light beam modifying device

Art Unit: 2875

[132] to provide a light beam with a light profile that peaks in relative intensity at about a 0 degree view angle (figures 1-10, column 4 lines 8-10).

Regarding claim 18, Reed discloses a lens [132] (figure 1).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 4, 6, 7, 9, 11, 13, 15, 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reed [US 6,808,289] in view of Hochstein [US 6,517,218].

Regarding claims 1, 9 and 16, Reed discloses a backlight having a housing [102], a control circuit [312, 112, 313], a switch [112], a flexible conduit [122] with wires [320], a head [106] and a light source module [336] with LEDs [339] (figures 1-10).

Reed does not disclose the light module including the primary heat sink and the secondary heat sink.

Hochstein discloses a LED light module [12] including a primary heat sink [18] and a secondary heat sink [30] (abstract, figures 1-3).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the light module of Reed with the primary and the secondary heat sink as taught by Hochstein for purpose of providing an advantageous

Art Unit: 2875

way of releasing heat in order to obtain higher performance of a device, for example: luminous.

Regarding claims 3 and 18, Reed discloses a lens [132] (figure 1).

Regarding claims 4, 15 and 19, Hochstein discloses a dome [26] (figure 2).

Regarding claims 6 and 7, Reed discloses the backlight providing a light beam with a light profile that peaks in relative intensity at about a 0 degree view angle (figure 7, column 4 lines 8-10).

Regarding claim 11, Hochstein discloses a primary well [32], a plurality of sub-wells [upper arc of 18], and a plurality of light emitting semiconductor chips [12] located in the sub-well (figures 1-3).

Regarding claim 13, Hochstein discloses a quantity of heat conductive adhesive [28] (figures 1-2).

6. Claims 2, 5, 12, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reed and Hochstein in view of Vriens et al. [US 5,813,753].

Regarding claim 2, Reed and Hochstein disclose a LED chip [339] but do not disclose the reflector.

Vriens et al. teaches the use of the reflector [23] in a LED chip (abstract, figure 2).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the LED of Reed with the reflector as taught by Vriens for

purpose of providing an advantageous way of controlling light intensity to a design direction.

Regarding claims 5 and 12, Vriens discloses a coating [45, 44] (abstract, column 1 lines 55-59).

Regarding claim 14, Hochstein discloses a quantity of light reflective adhesive [22] (figure 3).

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reed in view of Vriens et al.

Regarding claim 10, Reed discloses a LED chip [339] but does not disclose the well and the coating.

Vriens et al. discloses a LED chip having a well [43] and a coating [44, 45] (figure 2).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the LED chip of Reed by the well and the coating as taught by Vriens et al. for purpose of providing an advantageous way of producing white light.

### ***Conclusion***

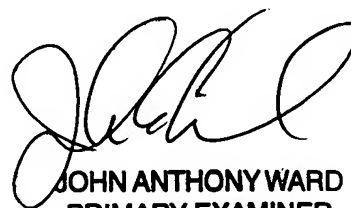
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shie et al. [US 6,480,389] discloses a heat dissipation structure for LED.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bao Q. Truong whose telephone number is (571) 272-2383. The examiner can normally be reached on Monday-Friday (8:00 AM - 4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bao Q. Truong  
Examiner  
Art Unit 2875



JOHN ANTHONY WARD  
PRIMARY EXAMINER